

Electronic Reporting under the Clean Air Act

This memo is a legal analysis of provisions of the Clean Air Act ("CAA") that may affect the ability of EPA to use electronic media for the reporting of data to EPA and other communications to EPA from regulated entities, although for purposes of this memo I subsume all such communications in the phrase "electronic reporting." This memo identifies provisions that pose a potential barrier to the use electronic reporting and provisions that are ambiguous in their effect on the possible use of electronic reporting. This memo also discusses some of the more important provisions on reporting, recordkeeping, and information collection that do not pose any barrier to electronic reporting.

The CAA regulates a variety of different air pollutants under many different programs:

- EPA has established health-based **National Ambient Air Quality Standards** (NAAQS) for six "criteria" pollutants – sulfur dioxide, particulate matter, oxides of nitrogen, carbon monoxide, ozone, and lead. Each state is required to submit a plan, a "state implementation plan," for the implementation, maintenance and enforcement of these national standards within the state.
- EPA has established standards for review of **new sources**, which must be met before any new facilities that emit pollutants can be brought into operation.
- EPA regulates the emissions of **hazardous air pollutants**, and has developed programs for preventing accidental releases.
- EPA has developed **emissions standards for motor vehicles** and various programs to help promote the use of alternative fuels and other technologies to reduce emissions of air pollutants.
- The 1990 Clean Air Act Amendments established the **Acid Rain Program**, the primary components of which include an emissions trading program for utilities emitting sulfur dioxide, and established emissions rate standards for those emitting oxides of nitrogen.
- The 1990 Clean Air Act Amendments also provide for the phase-out of various **stratospheric ozone-depleting substances**. Each of these programs has some reporting requirements that are implicated by the prospect of electronic reporting, and are discussed below.

It is worth noting that one basis for our concluding that a provision is a potential barrier to electronic reporting is the requirement that a document or report or other communication to EPA be signed or certified by a regulated official or regulated party. The technology to overcome this obstacle is rapidly approaching, such that many of the issues we raise in this memo may soon become moot. In particular, the U.S. House of Representatives recently passed a bill authorizing the use of digital signatures for some reporting requirements. If this becomes law, it could remove one legal obstacle to electronic reporting.

While this memorandum does not analyze the regulations promulgated pursuant to the statute, we have found within the statutory provisions of the CAA several types of provisions that pose potential barriers to electronic reporting:

First, a number of statutory sections require that certifications accompany some filing, report, or other submission to the EPA. These are potential barriers to electronic reporting because certifications imply that some type of written signature is involved, absent the passage of digital signature legislation or the implementation of regulations providing for digital signatures.

Second, some enforcement provisions in the CAA require that prosecutions for violations of the CAA involve a "knowing" violation. These provisions are potential barriers to electronic reporting because a "knowing" violation is more difficult to establish when dealing with electronic data; many innocent mistakes are made with respect to electronic data, and distinguishing them from intentional alterations of data may be difficult.

Third, some provisions require EPA to make "publicly available" certain kinds of data that are provided or reported to EPA. These provisions are potential barriers to electronic reporting, because making electronic data publicly available typically means that it is accessible via the internet; several regulated entities have expressed objections over the posting of information pertaining to compliance, emissions, or other sensitive matters over the internet. A successful challenge to this practice may mean that data will be reported to EPA in a non-electronic form.

Fourth, one provision in the CAA – section 502(b), pertaining to Title V Operating Permits – provides that an owner or operator of a facility that seeks operational changes in a permitted facility without triggering the need for a new operating permit must provide *written* notice to EPA and to the state permitting authority of the change. This is a potentially serious barrier to electronic reporting, because of the explicit reference to a writing in the statute.

On the other hand, several provisions of the CAA actually seem to contemplate the use of electronic reporting and represent opportunities for electronic reporting or transmission of information, even though these sections do not use the phrase "electronic reporting." Section 103(c)(2)¹ requires the EPA Administrator generally to "establish a national network to monitor, collect, and compile data to help determine the status and trends of air emissions, deposition, air quality, surface water quality, etc., and to ensure the comparability of air quality data collected from the States." Section 103(c)(3)² requires the Administrator to develop "improved methods for measurement, monitoring and analysis of air quality data, with emphasis placed on techniques for improving the ability to inventory emissions and identify and evaluate region-specific prevention and control options for ozone pollution." Both of these provisions seem to contemplate some forms of electronic reporting. In particular, ensuring the comparability of air quality data seems to suggest some standardization that may include an electronic form of data collection and reporting.

¹ 42 U.S.C. §7403(c)(2)

² 42 U.S.C. §7403(c)(3)

New sources that emit air pollutants under the CAA are subject to special permitting requirements. Section 111(j)(1)(A)³ provides that the Administrator may grant a waiver from new source review requirements to “encourage the use of an innovative technological system or systems of continuous emission reduction.” An “innovative technological system” may include an electronic data reporting system, so this provision seems to contemplate some forms of electronic data reporting.

Section 112(s)⁴ requires the Administrator to maintain a database on hazardous air pollutants listed in section 112(b)(1).⁵ EPA is required to report this information in aggregate form to Congress every three years. This provision seems to contemplate the use of electronic reporting, as aggregating non-electronic data would be unwieldy.

States with areas that do not meet national ambient air quality standards for ozone are subject to special requirements when submitting their State Implementation Plans. Section 181⁶ classifies ozone nonattainment areas as “marginal,” “moderate,” “serious,” “severe,” and “extreme.” Section 182(a)(3)(A) requires each state with at least one “marginal” area to submit an inventory detailing the sources of all emissions. Like section 112(s), this provision seems to contemplate the use of electronic data because of the volume of data involved, and the need for compiling it electronically.

Within the subchapter on Acid Deposition Control (the Acid Rain program), section 411⁷ provides for a penalty of \$2000 for each ton of sulfur dioxide emitted by a utility in excess of the allowances held. Section 412⁸ provides that emissions will be determined by “continuous emissions monitors,” devices that constantly measure the content of emitted gases. This method of monitoring seems to contemplate that the data will at least originally be in electronic form. Also, a device constantly monitoring emissions will generate such a voluminous amount of data that electronic reporting is probably necessary. Finally, section 412(d)⁹ provides that if a continuous emissions monitor or some other monitoring device breaks down and fails to record data, the Administrator shall treat the unit as if it were operating “in an uncontrolled manner” during the period in which the monitor was non-operational. Emissions are then calculated based upon the heat input. This provision seems to contemplate electronic reporting of data as well, because the calculations required to make such an extrapolation are easily performed by electronic devices, but difficult to accomplish manually.

The following is a program-by-program analysis of provisions of the Clean Air Act that have implications for electronic reporting with excerpts of relevant statutory language in boxes after each explanation.

³ 42 U.S.C. §7411(j)(1)(A)

⁴ 42 U.S.C. §7412(s)

⁵ 42 U.S.C. §7412(b)(1)

⁶ 42 U.S.C. §7511

⁷ 42 U.S.C. §7651j

⁸ 42 U.S.C. §7651k

⁹ 42 U.S.C. §7651k(d)

National Ambient Air Quality Standards

EPA is required by section 109¹⁰ of the CAA to establish primary and secondary air quality standards that are based upon considerations of the health and welfare of the public. Section 107(a)¹¹ establishes the basic requirement for state implementation plans (SIPs). It allows states to gain primary responsibility for assuring air quality within their entire geographic area by submitting a SIP explaining how they will achieve and maintain the NAAQS in the state.

Section 107(a): State submissions of SIPs	No barrier
Each State shall have primary responsibility for assuring air quality within [their] entire geographic area ... by submitting an implementation plan ... which will specify the manner in which national primary and secondary ambient air quality standards will be achieved and maintained	

The CAA also calls for the designation of areas as either "attainment" or "non-attainment," with respect to the ambient air quality standards established by EPA. Section 107(d)(1)(A) requires the Governor of each state to submit to EPA a list of attainment and non-attainment areas of the state. These provisions do not seem to pose any barrier to electronic reporting. Concerns regarding perjury and alteration of data are generally not applicable to such a situation, since the information typically submitted by states are of a public nature, and are thus not highly susceptible of manipulation or falsification.

Section 107(d)(1)(A): Lists of areas by air classification	No barrier
... the Governor of each State shall ... submit to the Administrator a list of all areas ... in the State, designating as (i) nonattainment, ... (ii) attainment, ... or (iii) unclassifiable	

Some provisions require the development of plans for implementing data reporting regimes. To the extent that these provisions require state officials and agencies to consider different means of collecting and reporting data, the SIPs themselves may be potential barriers to electronic reporting, or may themselves contemplate the use of electronic reporting. For example, section 110(a)(2)(B)¹² requires that SIPs must provide for establishment of data monitoring and reporting systems. Such systems may present an opportunity for electronic reporting or may even explicitly call for the reporting in electronic media of emissions data. However, such a system may also preclude electronic reporting if, for example, personal certifications are required. An enforcement program can take any number of forms, and again, may either specifically call for or require the use of electronic reporting or preclude it. Thus, the effect of several SIP provisions on electronic reporting is ambiguous.

¹⁰ 42 U.S.C. §7409

¹¹ 42 U.S.C. §7407

¹² 42 U.S.C. §7410(a)(2)(B)

Section 110(a)(2)(B): State monitoring of ambient air	Ambiguous
[A SIP shall] provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to (i) monitor, compile, and analyze data on ambient air quality , and (ii) upon request, make such data available to the Administrator ; [and] (C) include a program to provide for the enforcement of the measures described in subparagraph (A) [pertaining to emissions limitations]	

Section 110(a)(2)(F) authorizes the Administrator to require that SIPs include provisions for the installation and maintenance of monitoring equipment and the reporting of data using such equipment.

Section 110(a)(2)(F): Periodic emission reports to states	Ambiguous
[A SIP shall] require, as may be prescribed by the Administrator (i) the installation, maintenance, and replacement of equipment, and the implementation of other necessary steps, by owners or operators of stationary sources to monitor emissions from such sources, (ii) periodic reports on the nature and amounts of emissions and emissions-related data from such sources, and (iii) correlation of such reports by the State agency with any emission limitations or standards established pursuant to this chapter, which reports shall be available at reasonable times for public inspection .	

Section 110(a)(2)(K)(ii) authorizes the Administrator to require that SIPs provide for the submissions of data related to air quality modeling directly to the EPA Administrator. Again, the effect of these provisions on electronic reporting is ambiguous, because the form of regulation adopted pursuant to these statutory provisions is unknown. The next phase of ELI's research could include a determination of how SIPs have in fact implemented these provisions by regulation.

Section 110(a)(2)(K)(ii): State air modeling	Ambiguous
[A state implementation plan shall] provide for ... the submission, upon request, of data related to such air quality modeling to the Administrator ;	

Section 111¹³ requires EPA to develop emissions standards for any new stationary sources of air pollutants. The Administrator is required to list categories of stationary sources that will be subject to regulation under this section, and to issue emissions standards for any new facilities falling within these categories. A state may submit its own plan for establishing standards of performance for new stationary sources, and if EPA deems the plan adequate, EPA may delegate to the state the authority to implement and enforce the standards. Section 111(j)¹⁴ provides that the Administrator may grant a stationary source operator a waiver from emissions standards for new stationary sources to promote the use of innovative technological systems or systems of continuous emission reduction. The proposed innovative technological system or system of continuous emission reduction must, among other things, not pose any threat to the public health, welfare, or safety in its operation or malfunction. This may include a requirement by EPA that the proposed system provide for the prompt reporting of emissions of any unregulated pollutant that would otherwise be emitted in smaller quantities than would be the case without the proposed system.

¹³ 42 U.S.C. §7411

¹⁴ 42 U.S.C. §7411(i)

The effect of this provision on electronic reporting is ambiguous, as more research is needed to determine how this provision has been implemented by EPA.

Section 111(j): Permitting	Ambiguous
Any person proposing to own or operate a new source may request the Administrator for one or more waivers from the requirements of this section ... to encourage the use of an innovative technological system or systems of continuous emission reduction ... [and] the Administrator may ... grant a waiver under this paragraph, if the Administrator determines ... that ...the owner or operator of the proposed source has demonstrated to the satisfaction of the Administrator that the proposed system will not cause or contribute to an unreasonable risk to public health, welfare, or safety in its operation, function, or malfunction The Administrator may conduct such tests and may require the owner or operator of the proposed source to conduct such tests Such requirements shall include a requirement for prompt reporting of the emission of any unregulated pollutant from a system if such pollutant was not emitted, or was emitted in significantly lesser amounts without the use of such system.	

For areas in nonattainment with respect to ambient ozone standards established by EPA, special provisions apply. SIPs are required to contain actions by the state that will bring the nonattainment areas into attainment. Section 173¹⁵ contains general conditions that must be met before permits may be issued in nonattainment areas. The effect of this provision on electronic reporting is ambiguous, as more research is needed to determine how this provision has been implemented by EPA, and whether permits are required to take any specific forms or require certifications. Also, as mentioned above, ozone nonattainment areas may be classified as "marginal," "moderate," "serious," "severe," and "extreme." For marginal areas, section 182(a)(2)(C)¹⁶ mandates that SIPs must contain provisions that require permits in accordance with section 173. Like section 173, the effect of this provision on electronic reporting is ambiguous, because more research is needed to determine whether the regulations implemented pursuant to this section pose a barrier to electronic reporting.

Section 182(a)(2)(C): Permitting	Ambiguous
No later than the end of each 3-year period after submission of the inventory ... [of all emissions sources] and until the area is redesignated to attainment, the State shall submit a revised inventory [of all emissions sources]....	

Section 182(a)(3)(B) mandates that SIPs for states with marginal nonattainment areas must require certified annual emissions statements from owners or operators of stationary sources that emit significant (greater than 25 tons per year) amounts of oxides of nitrogen and other volatile organic compounds. This provision poses a potential barrier to electronic reporting, because a certification implies a handwritten signature.

¹⁵ 42 U.S.C. §7503

¹⁶ 42 U.S.C. §7511a(c)(2)(C)

Section 182(a)(3)(B): Permitting	Potential barrier
<p>...the State shall submit a revision to the State implementation plan to require that the owner or operator of each stationary source of oxides of nitrogen or volatile organic compounds provide the State with a statement, in such form as the Administrator may prescribe ... showing the actual emissions of oxides of nitrogen and volatile organic compounds from that source The statement shall contain a certification that the information contained in the statement is accurate to the best knowledge of the individual certifying the statement.</p>	

States with ozone, carbon monoxide, particulate matter, lead, sulfur oxides and nitrogen dioxide nonattainment areas are subject to a variety of other requirements regarding SIP submissions. For example, section 189(c)(2)¹⁷ requires that states meet certain milestones for bringing particulate matter non-attainment areas into attainment, and states are required to submit to EPA a demonstration that they are meeting those milestones. These types of reporting requirements do not pose any barriers to electronic reporting, because the information is of a public nature, and there is little danger of falsification of any information passing from a state regulator to EPA. Data integrity is thus generally not an issue.

Hazardous Air Pollutants

Section 112¹⁸ of the CAA governs the emission of hazardous air pollutants (HAPs). HAPs are listed in section 112(b)(1)¹⁹ and are updated by EPA's regulations. Any emission of any substance listed under section 112 must conform to the requirements of section 112. Section 112(j)²⁰ provides for a process for submitting permit applications for HAP emissions, including a standard application form and standard procedure that the Administrator is required to establish. This provision has an ambiguous effect on electronic reporting, depending upon the exact nature of the standard form and procedure that the Administrator has established by regulation, but more research is required before a definitive answer can be provided.

Section 112(j)(3): Permitting	Ambiguous
<p>...The Administrator shall not later than 18 months after November 15, 1990, and after notice and opportunity for comment, establish requirements for applications under this subsection including a standard application form and criteria for determining in a timely manner the completeness of applications.</p>	

Section 112(r)(6)(C)(iii)²¹ provides that the Chemical Safety and Hazard Investigation Board is to establish regulations requiring persons under the investigatory jurisdiction of the Board to report any accidental releases to the Board.

¹⁷ 42 U.S.C. §7513a(c)(2)

¹⁸ 42 U.S.C. §7412

¹⁹ 42 U.S.C. §7412(b)(1)

²⁰ 42 U.S.C. §7412(j)

²¹ 42 U.S.C. §7412(r)(6)(C)(iii)

Section 112(r)(6)(C): Rulemaking	Ambiguous
The Board shall—...(iii) establish by regulation requirements binding upon persons for reporting accidental releases into the ambient air subject to the Board's investigatory jurisdiction. Reporting releases to the National Response Center , in lieu of the Board directly, shall satisfy such regulations....	

Section 112(r)(7)²² authorizes the Administrator to promulgate regulations to provide for the prevention, detection and correction of accidental releases of any regulated substances, including any monitoring, record-keeping, reporting, training, vapor recovery, secondary containment, and other design, equipment, work practice and operational requirements. The effect of these provisions on electronic reporting is ambiguous. More research is needed to determine whether the regulations required to be established by this section pose any potential barriers to electronic reporting.

Section 112(r)(7)(A): Rulemaking	Ambiguous
In order to prevent accidental releases of regulated substances, the Administrator is authorized to promulgate release prevention, detection, and correction requirements which may include monitoring, record-keeping, reporting , training, vapor recovery, secondary containment, and other design, equipment, work practice, and operational requirements....	

General Enforcement Provisions

Section 113²³ sets forth the Administrator's general enforcement powers under the CAA. Section 113(c)(3)²⁴ provides that penalties may be imposed upon any person who "knowingly makes any false statement, representation, or certification in, or omits material from, or alters, conceals or fails to file any notice, application, plan, record, report, or other document" required under the CAA generally. Section 113(c)(1)²⁵ provides for specific punishments for any person who "knowingly violates any requirement or prohibition" of any implementation plan relating to new source standards, hazardous pollutant emissions, inspections, monitoring and entry, solid waste combustion, preconstruction requirements, emergency orders, permits (generally, under the CAA), acid deposition control, or stratospheric ozone control. This is a potential barrier to electronic reporting because the "knowingly" requirement set forth in this section may be difficult to establish in light of the tampering problems inherent in electronic reporting.

²² 42 U.S.C. §7412(r)(7)

²³ 42 U.S.C. §7413

²⁴ 42 U.S.C. §7413(c)(2)

²⁵ 42 U.S.C. §7413(c)(1)

Section 113(c)(1): Enforcement	Potential barrier
Any person who knowingly violates any requirement or prohibition of an applicable implementation plan, ... any order, ... requirement or prohibition of [various sections of this chapter], ... including a requirement of any rule, order, waiver, or permit promulgated or approved under such sections or subchapters, and including any requirement for the payment of any fee owed the United States under this chapter ... shall, upon conviction, be punishable by a fine ... or by imprisonment.	

Also, section 113(c)(2)²⁶ provides for penalties for any person who "knowingly" makes any false statement or representation in connection with a report, record or notice required under the CAA. This provision is also a potential barrier to electronic reporting because again, the "knowingly" requirement is more difficult to establish when dealing with electronic data.

Section 113(c)(2) (enforcement)	Potential barrier
Any person who "knowingly" – (A) makes any false material statement, representation, or certification in, or omits material information from, or knowingly alters, conceals, ... any notice, application, record, report, plan or other document required pursuant to this chapter (B) fails to notify or report as required under this chapter shall, upon conviction, be punished by a fine ... or by imprisonment for not more than 2 years, or both.	

General Recordkeeping, Inspection, and Right of Entry Provisions

Section 114²⁷ sets forth general recordkeeping, inspection, monitoring, and entry permission requirements under the CAA. Section 114(a)(1)²⁸ allows the Administrator to require any person subject to any provision of the CAA to establish and maintain records and make reports, either on a one-time or periodic basis. The effects of these provisions on electronic reporting are ambiguous. It is not yet clear as to whether the reporting and storage of data in electronic media would make it more easier to access and copy records or if it presents difficulties with inspection and verification of the originality and integrity of electronic data.

Section 114(a)(1): Recordkeeping	Ambiguous
The Administrator may require any person who owns or operates any emissions source, who manufactures emission control equipment or process equipment, who the Administrator believes may have information necessary for the purposes set forth in this subsection, or who is subject to any requirement of this chapter ... to -- (A) establish and maintain such records; (B) make such reports; (C) install, use, and maintain such monitoring equipment, and use such audit procedures, or methods....	

Section 114(a)(2)²⁹ provides the Administrator with a right of entry into any premises where records are required to be kept, and with access to and authority to copy any such records.

²⁶ 42 U.S.C. §7413(c)(2)

²⁷ 42 U.S.C. §7414

²⁸ 42 U.S.C. §7414(a)(1)

²⁹ 42 U.S.C. §7414(c)(2)

Section 114(a)(2): Inspection and copying of records	Ambiguous
The Administrator ... (A) shall have a right of entry to, upon, or through any premises of such person or in which any records required to be maintained ... are located, and (B) may at reasonable times have access to and copy any records, inspect any monitoring equipment or methods , ... and sample any emissions....	

Section 114(a)(1)(F), however, provides that the Administrator may require regulated parties to submit compliance certifications. This is a potential barrier to electronic reporting, because of the implication that certification implies a paper document. Also, section 114(a)(3)³⁰ specifically requires the Administrator to require the owners of “major stationary sources” to provide for the submission of compliance certifications, and authorizes the Administrator to require the same for any other parties regulated under the CAA.

Section 114(a)(1)(F): Compliance certifications	Potential barrier
[the Administrator may require any person to] ... submit compliance certifications	

Section 114(a)(3) further sets forth several elements of compliance certifications, but do not shed any light on whether a handwritten signature or some other non-electronic certification is necessary. Again, requiring a compliance certification may be a potential barrier to electronic reporting, depending on how these requirements have been implemented in EPA regulations.

Section 114(a)(3): Compliance certifications	Potential barrier
The Administrator shall in the case of any person which is the owner or operator of a major stationary source, and may, in the case of any other person, require enhanced monitoring and submission of compliance certifications. (...) [Compliance certifications] shall include (A) identification of the applicable requirement that is the basis of the certification, (B) the method used for determining the compliance status of the source, (C) the compliance status, (D) whether compliance is continuous or intermittent, (E) such other facts as the Administrator may require.	

Section 114(c)³¹ requires that records, reports or other information obtained under section 114 must be made available to the public, except if the reporting entity makes a "satisfactory showing" that the information contains trade secrets. The effect of this subsection (c) on electronic reporting is ambiguous. While electronic media make it easier to make information available to the general public, EPA has encountered and may encounter further resistance from regulated parties to the posting of electronic data. When EPA's electronic data systems are set up to make such reports or other information collected under the CAA available to the public, EPA will need to ensure that its system provides appropriate protection of trade secret data once the reporting entity has made such a satisfactory showing.

³⁰ 42 U.S.C. §7414(a)(3)

³¹ 42 U.S.C. §7414(c)

Section 114(c): Public availability of records	Ambiguous
Any records, reports or information obtained under ... this section shall be available to the public, except that upon a showing satisfactory to the Administrator by any person that records, reports, or information, or particular part thereof, (other than emission data) to which the Administrator has access under this section if made public, would divulge methods or processes entitled to protection as trade secrets ... the Administrator shall consider such record, report, or information or particular part thereof confidential....	

Section 118(a)³² provides generally that federal facilities are subject to Clean Air Act regulation, including all of the recordkeeping, reporting, and other information-related requirements. Under section 118(b), the President may grant exemptions if it is in the "paramount interest of the United States." This provision does not pose a barrier to electronic reporting. The interaction between different federal agencies is not likely to give rise to dangers of data falsification.

Section 118(a): General EPA authority over federal agencies	No barrier
Each department, agency, instrumentality of the executive, legislative, and judicial branches of the Federal Government and each officer, agent, or employee thereof, shall be subject to, and comply with, all Federal, State, interstate and local requirements, administrative authority, and process and sanctions respecting the control and abatement of air pollution in the same manner, and to the same extent as any nongovernmental entity.	

Solid Waste Combustion

Section 129³³ sets forth the CAA requirements for owners and operators of solid waste combustion sources. Section 129(c)³⁴ provides that the Administrator shall promulgate regulations requiring owners or operators of solid waste incinerators to monitor emissions and report the results of such monitoring. This provision is ambiguous in its effect on electronic reporting. More research is needed to determine if the regulations promulgated under this section do in fact pose barriers to electronic reporting.

Section 129(c): Rulemaking, monitoring, and record-keeping	Ambiguous
The Administrator shall ... promulgate regulations requiring the owner or operator of each solid waste incinerator unit – (1) to monitor emissions from the unit at the point at which such emissions are emitted into the ambient air Such regulations shall contain provisions regarding the frequency of monitoring, test methods and procedures ... and the form and frequency of reports or test results ... shall be reported separately and in a manner that facilitates review for purposes of enforcement actions. Such regulations shall require that copies of the results of such monitoring be maintained on file at the facility concerned and that copies shall be made available for inspection and copying by interested members of the public during business hours.	

³² 42 U.S.C. §7418

³³ 42 U.S.C. §7429

³⁴ 42 U.S.C. §7429(c)

Mobile Source Emissions

The CAA regulates the manufacture and operation of "mobile sources," or motor vehicles and aircraft. Sections 202 through 250³⁵ set forth the CAA provisions governing emissions from mobile sources, but only those provisions governing motor vehicles and fuels have implications for electronic reporting; provisions governing aircraft have no electronic reporting implications. Under section 202(c)³⁶ the Administrator is required to work with the National Academy of Sciences to undertake a study on the technological feasibility of meeting emissions standards prescribed by the Administrator. Under section 202(c)(4),³⁷ the Administrator may use her authority under the CAA to obtain information or records from any person, require the keeping of records, and require the making of reports, for purposes of carrying out the study with the National Academy of Sciences.

Like section 114(a)(2), the effect of this provision on electronic reporting is ambiguous because it is unclear as to whether electronic reporting makes the access and copying of records more or less difficult. Similarly, section 203³⁸ provides a set of requirements that parallel the general provisions of section 114. Section 203(a)(2)³⁹ prohibits any person from failing or refusing to permit access to or copying of any records, or failing to provide any information required under this mobile source emissions chapter of the CAA, excluding the provisions regarding aircraft. Again, the effect of this provision on electronic reporting is ambiguous because it is unclear if electronic reporting might make access or copying of data more or less difficult.

Section 202(c)(4): Recordkeeping and access to records	Ambiguous
The Administrator shall furnish to such Academy at its request any information which the Academy deems necessary for the purpose of conducting the investigation and study authorized by ... this subsection The Administrator may use any authority he has under this chapter ... (A) to obtain information from any person, and (B) to require such person to conduct such tests, keep such records, and make such reports respecting research or other activities	

Section 203(a)(2) : Recordkeeping and access to records	Ambiguous
...The following acts and the causing thereof are prohibited – ... (2)(A) for any person to fail or refuse to permit access to or copying of records or to fail to make reports or provide information required ... (B) for any person to fail or refuse to permit entry, testing or inspection authorized under section 7525(c) of this title or section 7542 of this title; (C) for any person to fail or refuse to perform tests, or have tests performed as required under section 7542 of this title.	

Section 206(a)(3)⁴⁰ provides that the Administrator may require manufacturers of motor vehicles to conduct such tests and provide such information as may be necessary to determine that it does not "contribute to an unreasonable risk to public health, welfare, or safety in its operation

³⁵ 42 U.S.C. §§7521 -- 7590

³⁶ 42 U.S.C. §7521(c)

³⁷ 42 U.S.C. §7521(c)(4)

³⁸ 42 U.S.C. §7522

³⁹ 42 U.S.C. §7522(a)(2)

⁴⁰ 42 U.S.C. §7525(c)(2)

or function," which is proscribed in section 202(a)(4).⁴¹ This subsection also provides that the Administrator may require manufacturers of motor vehicles to report promptly to the EPA if any devices, systems, or design elements cause any increase in the emissions of unregulated pollutants. Section 206(c)⁴² provides that the Administrator is authorized to inspect records, files, papers, etc. used by manufacturers in conducting emissions tests under this mobile source emissions chapter of the CAA. Like section 114(a)(2), section 202(c)(4), and section 203(a)(2), the effect of these provisions on electronic reporting is ambiguous because electronic data may be more or less difficult to access and copy.

Section 206(a)(3)(B): Recordkeeping and reporting	Ambiguous
The Administrator may conduct such tests and may require the manufacturer ... to conduct such tests and provide such information as is necessary to carry out [this subsection].... Such requirements shall include a requirement for prompt reporting of the emission of any unregulated pollutant from a system, device, or element of design if such pollutant was not emitted, or was emitted in significantly lesser amounts, from the vehicle or engine without use of the system, device, or element of design.	

Section 208(a)⁴³ requires manufacturers of new motor vehicle engines or engine parts to establish and maintain records, perform tests, make reports and provide information that the Administrator may require in connection with determining compliance with the provisions of this motor vehicle emissions chapter of the CAA, and to permit designees of the Administrator to access and copy any records at reasonable times. Like section 114(a)(2), section 202(c)(4), section 203(a)(2), and section 206(c), the effect of this provision on electronic reporting is ambiguous because electronic data may be more or less difficult to access and copy.

Section 208(a): Recordkeeping)	Ambiguous
Every manufacturer of new motor vehicles or new motor vehicle engines, and every manufacturer of new motor vehicle or engine parts or components, and other persons subject to the requirements of this ... subchapter, shall establish and maintain records , perform tests where such testing is not otherwise reasonably available, ... make reports and provide information the Administrator may reasonably require to determine whether the manufacturer or other person has acted or is acting compliance with this ... subchapter ... and shall ... permit ... the Administrator ... at reasonable times to have access to and copy such records .	

Section 208(c)⁴⁴ provides that any reports or information obtained by EPA under section 208 must be made available to the public except in the case of trade secrets. The effect of this provision on electronic reporting is ambiguous for the same reasons as for section 114(c), because regulated parties may object to the public posting of their compliance data electronically. And again, EPA must make sure that their system will adequately protect information that is shown to be a trade secret.

⁴¹ 42 U.S.C. §7521(a)(4)

⁴² 42 U.S.C. §7525(c)

⁴³ 42 U.S.C. §7542(a)

⁴⁴ 42 U.S.C. §7542(c)

Section 208(c): Public availability	Ambiguous
<p>Any records, reports, or information obtained under this ... subchapter shall be available to the public, except that upon a showing ... that records, reports, or information, or a particular portion thereof (other than emissions data), to which the Administrator has access under this section, if made public, would divulge methods or processes entitled to protection as trade secrets of that person, the Administrator shall consider the record, report or information or particular portion thereof confidential....</p>	

Section 211⁴⁵ pertains to the regulation of fuels. Section 211(b)⁴⁶ requires manufacturers of fuels and fuel additives to register them with the Administrator, providing the commercial name and composition of the product. The effects of these provisions on electronic reporting are ambiguous. More research is needed to determine if the registration procedures established by the Administrator contain any certification requirements that may preclude electronic registration, or perhaps present opportunities for electronic reporting.

Section 211(b): Registration of fuels and fuel additives	Ambiguous
<p>(1) ...the Administrator shall require -- ... (A) the manufacturer of any fuel to notify him as to the commercial identifying name and manufacturer of any additive...; (B) the manufacturer of any additive to notify him as to the chemical composition...</p> <p>(2) ...the Administrator may also require the manufacturer of any fuel and fuel additives – (A) to conduct tests to determine potential public health effects of such fuel or additive ... (B) to furnish the description of any analytical technique that can be used to detect and measure any additive in such fuel...</p>	

Section 211(d)⁴⁷ provides for civil penalties for failing to provide registration information on fuels and fuel additives required by section 211 generally.

Section 211(d): Civil penalties	Ambiguous
<p>Any person who violates ...[various subsections of this section] or who fails to furnish any information or conduct any tests required by the Administrator under subsection (b) of this section shall be liable</p>	

Section 211(k)(5)⁴⁸ provides that the Administrator may impose sampling, testing and record-keeping requirements upon any refiner, blender, importer or marketer of fuels or fuel additives to prevent violations of this section 211.⁴⁹

Section 211(k)(5): Rulemaking	Ambiguous
<p>...The Administrator may impose sampling, testing, and recordkeeping requirements upon any refiner, blender, importer, or marketer to prevent violations of this section.</p>	

⁴⁵ 42 U.S.C. §7545

⁴⁶ 42 U.S.C. §7545(b)

⁴⁷ 42 U.S.C. §7545(d)

⁴⁸ 42 U.S.C. §7545(k)(5)

⁴⁹ 42 U.S.C. §7545

Section 307(a)⁵⁰ provides that the Administrator may issue subpoenas for the production of relevant books, papers and documents, or information in connection with any determination of compliance or any other provision pertaining to the obtaining of information under this motor vehicle emissions chapter of the CAA. Except for emissions data, if such information is reasonably shown to be a trade secret, the Administrator shall consider it confidential and will not make such information available to the public.

Section 307(a): Subpoenas and trade secrets	Ambiguous
In connection with any determination [of a national or regional energy emergency]..., or for purposes of obtaining information under ... [various provisions] of this title, any investigation, monitoring, reporting requirement, entry, compliance inspection, or administrative enforcement proceeding under the chapter, ... the Administrator may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents , and he may administer oaths. Except for emission data, upon a showing satisfactory to the Administrator by such owner or operator that such papers, books documents, or information or particular part thereof, if made public, would divulge trade secrets or secret processes of such owner or operator, the Administrator shall consider such record, report, or information or particular part thereof, confidential....	

A similar provision in section 321⁵¹ allows the Administrator to obtain information for purposes of investigating the employment effects of various regulations. The effects of these provisions on electronic reporting are ambiguous, because of the objections that regulated parties may raise in connection with the public dissemination of information they provide.

Section 321(c): Reporting	Ambiguous
In connection with any investigation or public hearing conducted under subsection (b) of this section or as authorized in section 7419 of this title (relating to primary nonferrous smelter orders) the Administrator may issue subpoenas [sic] for the attendance and testimony of witnesses and the production of relevant papers, books, and documents , and he may administer oaths. Except for emission data, upon a showing satisfactory to the Administrator by such owner or operator that such papers, books documents, or information or particular part thereof, if made public, would divulge trade secrets or secret processes of such owner or operator, the Administrator shall consider such record, report, or information or particular part thereof, confidential....	

Acid Deposition Control

Sections 401 to 416⁵² set forth the provisions of the Acid Deposition Control Program, or the Acid Rain program. The most notable provisions of the Acid Rain program provide for the transfer of sulfur dioxide emissions allowances. However, in order to participate, a utility must have a "designated representative" within the meaning of section 402(26).⁵³ Also, under section

⁵⁰ 42 U.S.C. §7607(a)

⁵¹ 42 U.S.C. §7621(c)

⁵² 42 U.S.C. §§7651 -- 7651o

⁵³ 42 U.S.C. §7651c(26)

403(b)⁵⁴ transfer of a sulfur dioxide allowance is not effective until the Administrator receives written certification of the transfer, *signed by each party to the transfer*. This requirement must then be part of the regulations established by the Administrator to track the transfer of allowances. This set of provisions pose a potential barrier to electronic reporting of transactions because of the signature requirement.

Section 403(b): Reporting	Potential barrier
Allowances allocated under this subchapter may be transferred among designated representatives of the owners or operators of affected sources under this subchapter and any other person who holds such allowances, as provided by the allowance system regulations to be promulgated by the Administrator not later than eighteen months after November 15, 1990. Such regulations shall establish the allowance system prescribed under this section.... Transfers of allowances shall not be effective until written certification of the transfer, signed by a responsible official of each party to the transfer, is received and recorded by the Administrator.	

The Acid Rain program also provides for some allowances to be issued to utilities that agree to install scrubbers to reduce sulfur dioxide emissions. In order to qualify for these allowances, however, section 404(d)⁵⁵ requires utilities to produce a copy of an executed contract for the construction of the scrubber. This may be difficult to do electronically with a high degree of tamper-proofing, and thus poses a potential barrier to electronic reporting.

Section 404(d): Reporting	Potential barrier
(1) The owner or operator of any affected unit subject to an emissions limitation requirement under this section may petition the Administrator in its permit application under section 7651g of this title for an extension of 2 years of the deadline for meeting such requirement....(2) Such extension proposal shall – (A) specify the unit or units proposed for designation as an eligible phase I extension unit; (B) provide a copy of an executed contract , which may be contingent upon the Administrator approving the proposal, for the design engineering, and construction of the qualifying phase I technology for the extension unit....	

Similarly, section 409(a) authorizes allowances for utilities that "repower" old plants under newer, cleaner technology, provided the utility submits a binding contract for the construction and purchase of a "majority of the equipment to repower such unit." These requirements are also potential barriers to electronic reporting, at least for this purpose, because submitting a copy of a binding construction and purchase contract electronically may be difficult to do.

⁵⁴ 42 U.S.C. §7651b(b)

⁵⁵ 42 U.S.C. §7651c(d)

Section 409(a) (reporting)	Potential barrier
<p>...the owner or operator of an existing unit subject to the emissions limitation requirements of section 7651d(b) and (c) of this title may demonstrate to the permitting authority that one or more units will be repowered with a qualifying clean coal technology to comply with the requirements under section 7651d of this title. the owner or operator shall, as part of any such demonstration, provide satisfactory documentation of a preliminary design and engineering effort for such repowering and an executed and binding contract for the majority of the equipment to repower such unit and such other information as the Administrator may require by regulation....</p>	

Section 408⁵⁶ requires the Administrator to implement a federal permit program for the Acid Rain program. Section 408(d)⁵⁷ requires states to submit permit approval programs for "Phase 2" (beginning in 2000) to the Administrator for her approval. Section 408(e)⁵⁸ requires that in phase 2, owners or operators of power plants are to submit their permit applications to state permitting authorities. The effects of these provisions on electronic reporting are ambiguous. More research is needed to ascertain how state permitting authorities have set up their permitting programs, and if they involve, require, or preclude electronic reporting.

Section 408 (permitting)	Ambiguous
<p>(d)(1) ... each State in which one or more such units or sources are located shall submit in accordance with ... this chapter, a permit program for approval [by the Administrator]." (e) The owner or operator of each source that includes a new electric utility steam generating unit shall submit a permit application and compliance plan to the permitting authority</p>	

Title V Clean Air Act Operating Permits

Sections 501 to 507⁵⁹ set forth general provisions regarding various permitting processes provided for in the CAA. These provisions are referenced by other, substantive sections of the Clean Air Act that call for operating permits and related procedures.

Section 502(b)⁶⁰ requires the Administrator to promulgate regulations establishing the minimum requirements of a permit program to be administered by any air pollution control agency. The required elements include permit applications, including a standard application form and criteria for determining the completeness of applications, and monitoring and reporting requirements. The effect of this general provision on electronic reporting is ambiguous. More research is needed to determine if the established regulations contemplate forms of permit applications that preclude the use of electronic media for submission.

⁵⁶ 42 U.S.C. §7651g

⁵⁷ 42 U.S.C. §7651g(e)

⁵⁸ 42 U.S.C. §7651g(g)

⁵⁹ 42 U.S.C. §§7661 -- 7661f

⁶⁰ 42 U.S.C. §7661c(b)

Section 502(b) (permitting)	Ambiguous
The Administrator shall promulgate ... regulations establishing the minimum elements of a permit program to be administered by any air pollution control agency. These elements shall include each of the following: (1) Requirements for permit applications, including a standard application form ... [and] (2) Monitoring and reporting requirements.	

Specific parts of section 502(b)⁶¹ warrant further discussion. Section 502(b)(10)⁶² provides that the Administrator shall allow changes in a permitted facility without requiring a permit revision if the changes are not prohibited modifications and do not result in emissions in excess of the permitted allowance, provided that the facility provides prior *written* notice to the Administrator and the state permitting authority. This is a potential barrier to electronic reporting of the written notice required of the permittee, because written notice clearly implies a hard copy on paper.

Section 502(b)(10): Rulemaking and permitting	Potential barrier
[The elements of EPA regulations on permitting shall include] ... [p]rovisions to allow changes within a permitted facility ... without requiring a permit revision, ... [p]rovided, [t]hat the facility provides the Administrator and the permitting authority with written notification in advance of the proposed changes which shall be a minimum of 7 days....	

Section 502(b)(7)⁶³ requires the Administrator to ensure against unreasonable delay in issuing decisions on permits by specifying in the procedures established under section 502 that the failure of a permitting authority to act on a permit in accordance with certain time periods will be deemed a final action for purposes of obtaining judicial review. This provision is a potential barrier to electronic reporting because technical failures may cause an electronically submitted permit application to fail to reach the permitting authority, and this waiver provision may inappropriately preclude action by the permitting authority.

Section 502(b)(7): Permitting	Potential barrier
[T]o ensure against unreasonable delay by the permitting authority, adequate authority and procedures to provide that a failure of such permitting authority to act on a permit application or permit renewal application ... shall be treated as a final permit action solely for purposes of obtaining judicial review in State court....	

Section 503⁶⁴ provides for the submission of compliance plans and results of required monitoring, as well as the periodic submission of progress reports. Section 503(b)(2)⁶⁵ requires compliance plans be certified to show that the facility is in compliance with any applicable requirements of the permit.

⁶¹ 42 U.S.C. §7661a(b)

⁶² 42 U.S.C. §7661a(b)(10)

⁶³ 42 U.S.C. §7661a(b)(7)

⁶⁴ 42 U.S.C. §7661b

⁶⁵ 42 U.S.C. §7661b(b)(2)

Section 503(b)(2): Rulemaking and permitting	Potential barrier
The regulations shall further require the permittee to periodically ... certify that the facility is in compliance with any applicable requirements of the permit....	

Section 503(c)⁶⁶ requires that compliance plans accompanying permit applications must be signed by a responsible official certifying to the accuracy of the information submitted.

Section 503(c): Signed and certified permit information	Potential barrier
Any person required to have a permit shall, not later than 12 months after the date on which the source becomes subject to a permit program ... submit to the permitting authority a compliance plan and an application for a permit signed by a responsible official, who shall certify the accuracy of the information submitted...	

Similarly, section 504(c)⁶⁷ requires that permit applications submitted by corporate entities must be certified by a responsible official. These provisions are potential barriers to electronic reporting, because signatures and certifications may be problematic for electronic documents. Also, progress reports are required to be signed and certified and are therefore potential barriers to electronic reporting.

Section 504(c): Signed and certified progress reports	Potential barrier
"Each permit issued under this subchapter shall set forth inspection, entry, monitoring, compliance certification, and reporting requirements to assure compliance with the permit terms and conditions Any report required to be submitted by a permit issued to a corporation under subchapter shall be signed by a responsible corporate official, who shall certify its accuracy. "	

Stratospheric Ozone Protection

Sections 601 to 618⁶⁸ set forth the provisions for Stratospheric Ozone Protection, and regulate the manufacture and use of substances that deplete the earth's stratospheric ozone layer. Such substances are listed in section 601⁶⁹ as "class I" and "class II" substances. Section 603(a)⁷⁰ requires the Administrator to amend pre-existing regulations for class I and class II substances, substances listed under 602, and also to amend requirements as to the time and manner of reporting as required generally under this ozone layer protection chapter of the CAA. Section 603(b)⁷¹ requires that any person producing, exporting, or importing a class I or class II substance to submit a *periodic* report to the Administrator, with a signature and attestation by a responsible officer. Also, any person servicing motor vehicle air conditioners, which have historically used class I and class II substances extensively, must apply for certification from the Administrator. The application for certification must be signed and attested by the applicant. These provisions pose a

⁶⁶ 42 U.S.C. §7661b(c)

⁶⁷ 42 U.S.C. §7661c(c)

⁶⁸ 42 U.S.C. §§7671 -- U.S.C. §7671q

⁶⁹ 42 U.S.C. §7671

⁷⁰ 42 U.S.C. §7671b(a)

⁷¹ 42 U.S.C. §7671b(b)

potential barrier to electronic reporting, in that signatures and attestations are problematic when associated with electronic reporting.

Section 603(b): Quarterly reporting	Potential barrier
On a quarterly basis, or such other basis (not less than annually) as determined by the Administrator, each person who produced, imported, or exported a class I or class II substance shall file a report with the Administrator setting forth the amount of the substance that such person produced, imported, or exported during the preceding reporting period. Each report shall be signed and attested by a responsible officer .	

Section 603(c)⁷² requires any person producing, exporting, or importing a class I or class II substance to submit a transaction-specific report to the Administrator. The effects of these provisions on electronic reporting are ambiguous. More research is needed to determine whether the regulations as amended pose any barriers to electronic reporting.

Section 603(c): Reporting	Ambiguous
...each person who produced, imported, or exported a class I substance ... shall file a report with the Administrator setting the amount of such substance that such person produced, imported, and exported during the baseline year....	

⁷² 42 U.S.C. §7671h(c)